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|---|---|
| **Clinical guidelines**<br>**LOWER EXTREMITY CTA/CTV** | **Original Date: July 01, 2008** |
| **CPT Codes: 73706** | **Last Revised Date: ~~May~~ March 2021~~1~~** |
| **Guideline Number: NIA_CG_061-1** | **Implementation Date: January 2023~~2~~** |

**INDICATIONS FOR LOWER EXTREMITY CTA/CTV (COMPUTED TOMOGRAPHY ANGIOGRAM / COMPUTED TOMOGRAPHY VENOGRAM)**

**Abdominal Arteries CTA (CT Angiography) (CPT Code 75635) includes run-off so this is never approved when that ~~one~~ procedure has been.**

**Peripheral Vascular Disease and Abdominal Arteries CTA (CT Angiography) (CPT Code 75635) has not been recently approved**

- Critical Limb ischemia **ANY** of the below with clinical signs of peripheral artery disease. Ultrasound imaging is not needed. If done and negative, it should still be approved due to high false negative rate[1, 2] ~~(Shishehbor, 2016; Weiss, 2017)~~
    - Ischemic rest pain
    - Tissue loss
    - Gangrene
- Claudication with abnormal (ankle/brachial index, arterial Doppler)[3-5] ~~(Ahmed, 2017; Pollak, 2012, 2013)~~
- Clinical concern for vascular cause of ulcers with abnormal or indeterminate ultrasound (ankle/brachial index, arterial Doppler)[6] ~~(Rosyd, 2017)~~
- After stenting or surgery with signs of recurrent symptoms OR abnormal ankle/brachial index; abnormal or indeterminate arterial Doppler, OR pulse volume recording)[5] ~~(Pollak, 2012)~~

**Popliteal Artery Entrapment Syndrome** with abnormal arterial ultrasound[7] ~~(Williams, 2015)~~

**Deep Venous Thrombosis** with clinical suspicion of lower extremity DVT after abnormal or non-diagnostic ultrasound where a positive study would change management[8-10] ~~(Hanley, 2013; Karande, 2016; Katz, 2014)~~

**Clinical suspicion of vascular disease** with abnormal or indeterminate ultrasound or other imaging

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- Tumor invasion[11] ~~(Kransdorf, 2018)~~
- Trauma[12] ~~(Wani, 2012)~~
- Vasculitis[13] ~~(Fonseca, 2017)~~
- Aneurysm[14] ~~(Verikokos, 2014)~~
- Stenosis/occlusions[15] ~~(Menke, 2010)~~

**Hemodialysis Graft Dysfunction** after Doppler ultrasound not adequate for treatment decisions[16] ~~(Murphy, 2017)~~

**Vascular Malformation**[17, 18] ~~(Madani, 2015; Obara, 2019)~~ - If MRA is contraindicated
- Non diagnostic doppler ultrasound

**Note**: CTA useful in delineating high flow lesions such as an arteriovenous malformation.

**Traumatic injuries** with clinical findings suggestive of arterial injury[12] ~~(Wani, 2012)~~

**Assessment/evaluation of known vascular disease/condition**

**Pre-operative/procedural evaluation**
- Pre-operative evaluation for a planned surgery or procedure[3] ~~(Ahmed, 2017)~~

**Post- operative/procedural evaluation**
- A follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested[19, 20] ~~(Conte, 2019; Cooper 2018)~~

**Special Circumstances**[2]
~~(Weiss, 2017)~~
- High suspicion of an acute arterial obstruction - Arteriography preferred (the gold standard).
- Renal impairment
    - Not on dialysis
        - Mild to moderate, GFR 30-89 ml/min MRA can be done
        - Severe, GFR < 30 ml/min MRA without contrast
    - On dialysis
        - CTA with contrast can be done
- Doppler ultrasound can be useful in evaluating bypass grafts

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**BACKGROUND**

Lower extremity computed tomography angiography (CTA) is an effective, noninvasive and robust imaging modality that is used in the assessment of symptomatic lower extremity vascular disease. It has excellent spatial resolution and shows accurate details of peripheral


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vasculature. CTA is an effective alternative to catheter-based angiography and allows accurate planning of open surgical and endovascular interventions.

**OVERVIEW**

**Abdominal Arteries CTA** – For imaging of the abdomen, pelvis **AND** both legs (CTA aorto-iliofemoral runoff; abdominal aorta and bilateral iliofemoral lower extremity runoff) use CPT code 75635.

**Peripheral Arterial Disease** – CTA is used in the evaluation of patients with peripheral arterial disease. It can be used to evaluate the patency after revascularization procedures. It is the modality of choice in patients with intermittent claudication. A drawback is its hampered vessel assessment caused by the depiction of arterial wall calcifications, resulting in a decreased accuracy in severely calcified arteries.

**Chronic Limb Threatening Ischemia** – Assessment and promotion of blood flow through the calf arteries is very important in patients with chronic limb threatening ischemia. CT Angiography allows for visualization of pedal vessels.

**Surgical or Percutaneous Revascularization** – CTA is accurate in the detection of graft-related complications, including stenosis and aneurysmal changes. It can reveal both vascular and extravascular complications.

**CTA and screening for peripheral vascular disease:** The USPSTF (U.S. Preventive Services Task Force) does not recommend routine screening for peripheral vascular disease in asymptomatic patients.[21] High risk patients (e.g., diabetics) may be screened with ABI (ankle brachial index) and duplex ultrasound.

**POLICY HISTORY**

| Date | Summary |
|---|---|
| March 2022 | No changes |
| May 2021 | No changes |
| May 2020 | • Clarified that CTA does not include a baseline CT exam<br>• Expanded section about vascular malformation to include initial testing.<br>• Added information about renal function and contrast agents<br>• Added acute arterial obstruction and renal impairment<br>• Simplified language<br>• Updated references |
| May 2019 | • Added indication for deep venous thrombosis<br>• Reformatting and new references. |


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## ADDITIONAL RESOURCES


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